

***NEW DATA SUPPORT ACTIVITIES FOR THE FAST-PHYSICS SYSTEM TESTBED &
RESEARCH (FASTER) PROJECT***

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ABSTRACT

The multi-institution FAST-physics System TESTbed and Research (FASTER) project, funded by the U.S. DOE Earth System Modeling program, aims to evaluate and improve the parameterizations of fast processes (those involving clouds, precipitation, and aerosols) in global climate models, using a combination of numerical weather prediction models, single-column models, cloud-resolving models, large-eddy simulations, full global climate model output and ARM active and passive remote sensing, and in situ data. The FASTER data integration team provides tailored data sets, statistics, best estimates and quality control data, as needed and defined by FASTER participants. This poster highlights the latest activities by the data integration team including cloud, atmospheric state and aerosol properties for customized grids and averaging intervals, extended time series of integrated thermodynamic quantities (CAPE, CIN, mixing layer height, etc.), and partitioning of stratiform and convective precipitation using high time resolution and pixel-level data from continuous ARM observations and complementary data sets. A particular emphasis has been placed on IOPs at the ARM SGP site including the Spring 2000 Cloud IOP, the Spring 2003 Aerosol IOP and RACORO (2009). In addition to the FASTER team, these data sets will be made available to the ASR Science Team.